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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/533,554	03/22/00	SATO	Y OPS CASE 489

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KALAMAZOO MI 49008-1699

MMC1/0606

EXAMINER

PEREZ, G

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 06/06/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/533,554

Applicant(s)

SATO, YOSHIO

Examiner

Guillermo Perez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20 is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 11 and 16-19 is/are rejected.
- 7) ☒ Claim(s) 9 and 12-15 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☒ The proposed drawing correction filed on 26 March 2001 is: a) ☒ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-8 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroshi (JP11197843) in view of Huber (U. S. Pat. No. 5,041,748).

Hiroshi discloses a driving unit of a welding equipment provided with a force application shaft (7) that is driven by a motor (5b), comprising:

a screw shaft (6a) co-axially fixed with a rotary shaft (5i) of the motor. Hiroshi discloses a screw shaft (6a) fixed to and co-axially aligned with the rotary shaft (5i) of the motor for rotation therewith, the screw shaft (6a) having an externally threaded screw portion at the output end thereof. Hiroshi discloses that a rotary force output from the rotary shaft (5I) of the motor is converted into linear movement of the force application shaft (6). Hiroshi discloses that the rotary shaft (5I) includes a bore hole at the output side thereof receiving an end of the screw shaft (6a) therein. Hiroshi discloses that the screw shaft (6a) is substantially integrally provided on the rotary shaft (5I) of the motor by rendering the rotary shaft (5I) of the motor hollow to form a hollow portion and having the screw shaft (6a) penetrate the hollow portion to fix the screw shaft (6a) to the hollow portion.

However, Hiroshi does not disclose that the screw shaft is integrally provided on the rotary shaft of the motor by extending the rotary shaft of the motor in the output direction of the motor to form the screw shaft on an extension portion. Hiroshi does not disclose that the screw shaft is substantially integrally provided on the rotary shaft of the motor by fixing the screw shaft to the rotary shaft of the motor utilizing a friction force. Hiroshi does not disclose that the nut is integrally provided on the force application shaft by rendering the force application shaft hollow, and forming a screw on the inner periphery of the force application shaft at the end thereof.

Hiroshi does not disclose that the nut is substantially integrally provided on the force application shaft by rendering the force application shaft hollow, and fixing a nut to the inner periphery of the force application shaft at the end thereof. Hiroshi does not disclose that the nut is substantially integrally provided on the force application shaft by fixing the nut to the force application shaft at the end thereof. Hiroshi does not disclose that the force application shaft is co-axially aligned with the screw shaft and having at one end thereof a threaded opening threadably engaged with the threaded screw portion of the screw shaft. Hiroshi does not disclose a stabilizing mechanism engaging the force application shaft to permit solely linear movement in the lengthwise direction thereof. Hiroshi does not disclose that the stabilizing mechanism comprises a ball spline mechanism preventing rotation of the force application shaft.

Huber discloses that the screw shaft (19) is integrally provided on the rotary shaft (17,18) of the motor by extending the rotary shaft (17,18) of the motor in the output direction of the motor to form the screw shaft (19) on an extension portion. Huber

discloses that the screw shaft (19) is substantially integrally provided on the rotary shaft (17,18) of the motor by fixing the screw shaft (19) to the rotary shaft (17,18) of the motor utilizing a friction force. Huber discloses that the nut (21) is integrally provided on the force application shaft (20) by rendering the force application shaft (20) hollow, and forming a screw (22) on the inner periphery of the force application shaft (20) at the end thereof.

Huber discloses that the nut (21) is substantially integrally provided on the force application shaft (20) by rendering the force application shaft (20) hollow, and fixing a nut (21) to the inner periphery of the force application shaft (20) at the end thereof. Huber discloses that the nut (21) is substantially integrally provided on the force application shaft (20) by fixing the nut (21) to the force application shaft (20) at the end thereof. Huber discloses that the force application shaft (20) is co-axially aligned with the screw shaft (17,18) and have at one end thereof a threaded opening (22) threadably engaged with the threaded screw portion (22) of the screw shaft (19). Huber discloses a stabilizing mechanism (22) engaging the force application shaft (20) to permit solely linear movement in the lengthwise direction thereof. Huber discloses that the stabilizing mechanism (22) comprises a ball spline mechanism preventing rotation of the force application shaft (20). Huber's invention has the purpose of avoiding high inertia torque and allow quick and accurate movement of the actuator.

It would have been obvious at the time the invention was made to modify the driving unit of a welding equipment of Hiroshi and provide it with the screw shaft, the rotary shaft, the force application shaft, and the stabilizing mechanism disclosed by

Huber for the purpose of avoiding high inertia torque and allow quick and accurate movement of the actuator.

2. Claims 10-11 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroshi in view of Huber as applied to claim 1 above, and further in view of J. Macbeth (U. S. Pat. No. 546,437).

Hiroshi and Huber disclose a welding equipment as described on item 1 above. However, neither Hiroshi nor Huber disclose a machining part provided on the end of the rotary shaft opposite to the output side thereof, on which a manual operating handle is mounted. Neither Hiroshi nor Huber disclose a machining part provided on the end of the screw shaft opposite to the output side of the rotary shaft, on which a manual operating handle is mounted.

J. Macbeth discloses a machining part (r) provided on the end of the rotary shaft (E) opposite to the output side thereof, on which a manual operating handle (H) is mounted. Neither Hiroshi nor Huber disclose a machining part (r) provided on the end of the screw shaft (F) opposite to the output side of the rotary shaft (E), on which a manual operating handle (H) is mounted. J. Macbeth's invention has the purpose of providing a manual operation of the shaft mechanism.

It would have been obvious at the time the invention was made to modify the welding equipment of Hiroshi and Huber and provide it with the machining part configuration of J. Macbeth for the purpose of providing a manual operation of the shaft mechanism.

Allowable Subject Matter

Claim 20 is allowed.

Claims 9 and 12-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art's references of record do not disclose that a driven part is provided on the rotary shaft of the motor or the screw shaft and positioned between the rear of a body of the motor and the front of a position detector for transmitting the torque of the motor and a manual operating driving part that is positioned eccentrically from the screw shaft for transmitting a turning torque.

Response to Arguments

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

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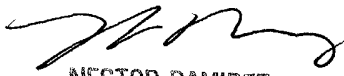
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305 3432 for regular communications and (703) 305 3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

Guillermo Perez
June 4, 2001


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